

REMARKS

This communication is in response to the Action of December 1, 2005. In that Action, claims 1 through 25 were rejected.

The applicants have amended claims 1, 3 through 6, 8 through 10, 12 through 18, and 20 through 23 to clarify them and more accurately define the present invention, and have canceled claims 2, 7, 11 and 19. In addition, the applicants have added claims 26 through 28 to more fully claim the present invention. Further, the applicants have amended the specification to correct numerous inadvertent errors therein, and are submitting herewith two corrected sheets of the drawings to remove inadvertent errors therefrom.

The Examiner first objects to claim 3 because of the omission of a period at the end thereof. The applicants have corrected this oversight in the above amendment.

The Examiner next rejects claims 1 through 25 under 35 U. S. C. 102 as being anticipated by U. S. Patent 5,926,488 to Khayrallah. The Examiner appears to contend that the Khayrallah reference, through the description for demodulator 116 and decoder 120 therein stating that Reed-Muller coding is used therewith along with soft decision decoding, meets the rejected claims. With this contention the applicants must respectfully disagree.

A major difference between the Khayrallah reference disclosure and the present invention is the clear indication in the signal processing sequence shown in Figure 1 of that reference of demodulating the channel signal but once and making no use of any soft decision information from the following channel decoder in doing so. The decoding process is described in the Khayrallah reference as ending with a final guess being made of the codeword sent from which the information bits are recovered, and with no further processing using anything from the decoded being described. There is some indication in the reference that the soft decisions decoder involved is an errors and erasures decoder which further indicates that the soft decisions data is not used in connection with any further demodulation having results improved thereby.

In these circumstances, the applicants have amended the claims to clarify their requiring iterative use of the soft decision data, obtained in one demodulating and decoding block, being used in a subsequent block also having a demodulator receiving the channel signal as well as that reliability data. This is in accord with the clear showing of such an arrangement in Figure 4 of the present application and the accompanying textual description. The applicants respectfully submit that the present claims are thus clearly distinguished from the Khayrallah reference disclosures, and are therefore allowable.

In view of the foregoing, the applicants respectfully request that the Examiner reconsider the rejection of the claims in view of the amending thereof, and further request that the present claims now be allowed.

The Commissioner is authorized to charge any additional fees associated with this paper or credit any overpayment to Deposit Account No. 11-0982.

Any inquiries regarding this application should be directed to Theodore F. Neils at (612) 339-1863.

Respectfully submitted,

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